

# Trash Talk

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## 2012 Analysis of Logan MSW System

MASSDEP – SWAC

April 25, 2013



# ← Looking back to move forward →

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- 4 Year baseline of Waste and Recycling data.
- Project generated C&D – working closely with Capital Programs construction management to meet specification requirements.
- Operational generated C&D was historically included in MSW.
- We have a better picture of our practices and allows more effective communication to regulators and the public.



# Infancy of reporting

- Inadequate reporting
- Incomplete picture
- Incorrect nomenclature
- Improving data acquisition results in meaningful analysis and reporting.

	Recycling	Trash	Total Waste	Diversion Rate
• Jul-08	7.447	658.37	665.817	1.12%
• Aug-08	16.697	609.75	626.447	2.67%
• Sep-08	16.677	563.58	580.257	2.87%
• Oct-08	34.274	567.708	601.982	5.69%
• Nov-08	16.642	455.36	472.002	3.53%
• Dec-08	32.837	588.69	621.527	5.28%
• Jan-09	17.485	472.36	489.845	3.57%
• Feb-09	21.052	582.39	603.442	3.49%
• Mar-09	20.865	737.37	758.235	2.75%
• Apr-09	28.44	636.33	664.77	4.28%
• May-09	28.372	617.26	645.632	4.39%
• Jun-09	26.105	602.38	628.485	4.15%



# “Trash”

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- “Trash” is now broken into WTE and Landfill
- Some locations, specifically excluded due to designation, ie: cargo, pallets.
- C&D from terminal operations tracked separate from Capital Programs C&D.



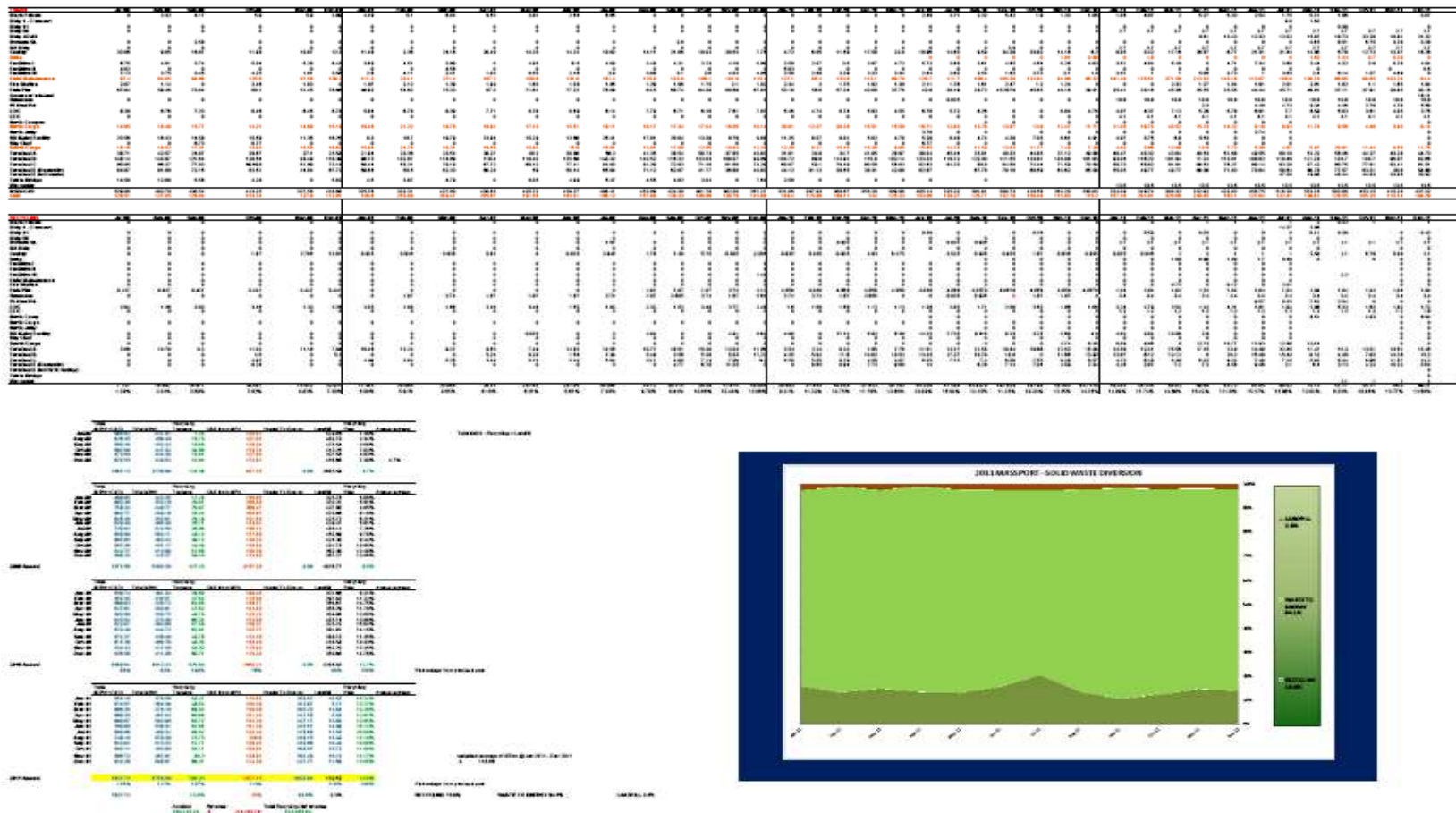
# “Recycling”

- Recycling, when treated as a commodity with intrinsic value, should produce a profit (cost avoidance).
- Existing contract has inherent disincentives to recycle. Recycling increases = waste hauler's profits decreases. \*
- Single Stream conversion produces higher cost avoidance than segregated recycling produces rebates.



# Recycling Metrics Scale of Analysis

1 of 43 Spreadsheets tracking all Recycling, Trash, and WTE



# Terminals and Piers

2011 analysis of Logan MSW - per Terminal/Pier

Location	Sub-location	# of PAX	Tons MSW (shown in pounds)	Lbs./PAX	\$/pound hauled
Logan Wide		28,475,860	11,501,180	0.40	\$0.06
Term A		5,920,373	1,483,240	0.25	\$0.05
	Term A / Main	3,444,705	739,220	0.21	\$0.05
	Term A / Satellite	2,475,668	776,920	0.31	\$0.05
Term B		8,485,431	2,737,480	0.32	\$0.05
	Term B / Pier B	4,503,326	1,049,880	0.23	\$0.05
	Term B / Pier A	3,628,375	1,751,100	0.48	\$0.05
Term C		9,907,289	2,113,800	0.21	\$0.06
	Term C / Pier A-B	3,319,007	1,085,240	0.33	\$0.06
	Term C / Pier C-D	6,588,282	1,047,780	0.16	\$0.06
Term E		4,162,767			
	INTL	2,284,118			
	Dom. and Term	1,878,649	1,628,940	0.39	\$0.05



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# 2012 Waste Sorts

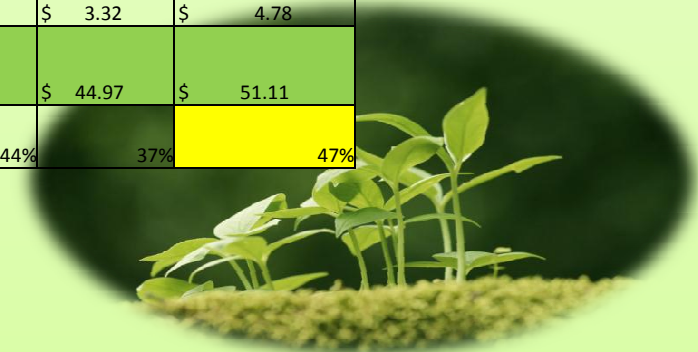
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- One ton sample removed from a container.
- 100% of the sample is sorted into its recyclable components and residual landfill material.
- Plastic, Metal, Glass, Fiber, Organics, Residual.
- How to reach our short/long term goals?
- How much money is in the trash can?
- Process repeated annually during next three years of new Resource Management contract.



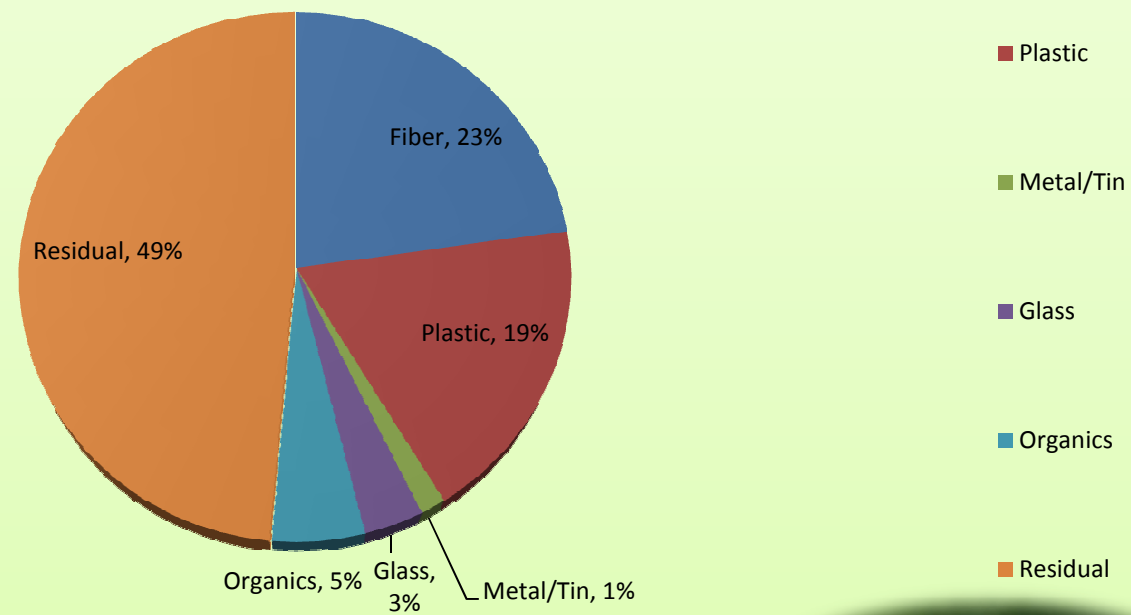
# 2012 Waste sorts – cont.

Location	Gate A/22	Gate A/2	Gate B/5	Gate B/29	Gate C/28	Gate D/1C	Gate E/8	Average	% of Sample
Sample mass	2100	2000	2200	2120	1860	2028	2200	2073	100
Fiber	923.5	233	660	180	780	249	275	472	23%
Plastic	383.5	656	277.5	359	170	598.5	243	384	19%
Metal/Tin	32	23	73	14	11.5	26	30	30	1%
Glass	124	40	127.5	29	30.5	26	115	70	3%
Organics	31.5	13	121	187	104	98.5	210	109	5%
Residual	605.5	1035	941	1351	764	1030	1327	1008	49%
Recyclable/ Organics	1463	952	1138	582	992	899.5	663	1065	51%
Average % recyclable/ organic	70%	48%	52%	27%	53%	44%	30%	51%	
Ave. \$/Ton	\$ 110.97	\$ 103.34	\$ 114.02	\$ 114.04	\$ 90.27	\$ 90.27	\$ 110.61	\$ 104.79	
Actual disp. Cost for sample mass	\$ 116.52	\$ 103.34	\$ 125.42	\$ 120.88	\$ 83.95	\$ 91.53	\$ 121.67	\$ 109.05	
Residual Waste cost	\$ 33.60	\$ 53.48	\$ 53.65	\$ 77.03	\$ 34.48	\$ 46.49	\$ 73.39	\$ 53.16	
SS Cost (\$10/T)	\$ 7.32	\$ 4.76	\$ 5.69	\$ 2.91	\$ 4.96	\$ 4.50	\$ 3.32	\$ 4.78	
Potential Cost avoidance	\$ 75.61	\$ 45.10	\$ 66.09	\$ 40.94	\$ 44.51	\$ 40.55	\$ 44.97	\$ 51.11	
Potential Savings %	65%	44%	53%	34%	53%	44%	37%	47%	



# Waste sorts – cont.

2012 Logan Airport Terminal - Waste Sort



# FOG management

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- Tenants purchase cooking oil, pay for trap maintenance and grease disposal.
- Contracted cleaners, 3<sup>rd</sup> shift, responsible to transport oil from 2<sup>nd</sup> floor food courts down to collection tanks.
- 3 inherent disincentives to try harder. \*
- Difference between reported purchases and reclaimed vegetable oil.
- Central Services combined the trap cleaning and FOG management under Facilities/Capital Programs. We manage cleaning schedules, track incoming oil purchases and quantities reclaimed under contractual reporting obligations.



# Central Services

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- Massport is moving forward in its management of “Downstream Secondary Commodities” by offering Centralized Waste Services to our tenants, concessionaires, and airlines.
- All tenants will have full access to all recycling infrastructure, so that everyone can participate.
- Incentives for recycling; rebates will be tied to “profit sharing” or incentives, i.e. decreased usage fees for Centralized Services.
- How do we structure our food courts and concessions to facilitate a greener airport?
- How do we encourage our passengers to participate?
- Need to change the way we do business.



# How we collect waste and what we are asking from the public

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- Transient public, just traveling through.
- 80K PAX daily plus 5-10K Logan based employees
- How to grab their attention during sometimes stressful ambience of airport.
- Terminal area survey of trash & recycling barrels.
- Daily workers – “entrenched process” analysis & re-training in potentially 8 languages.



# 2011 Barrel Survey

Problem – lost within visual stimuli



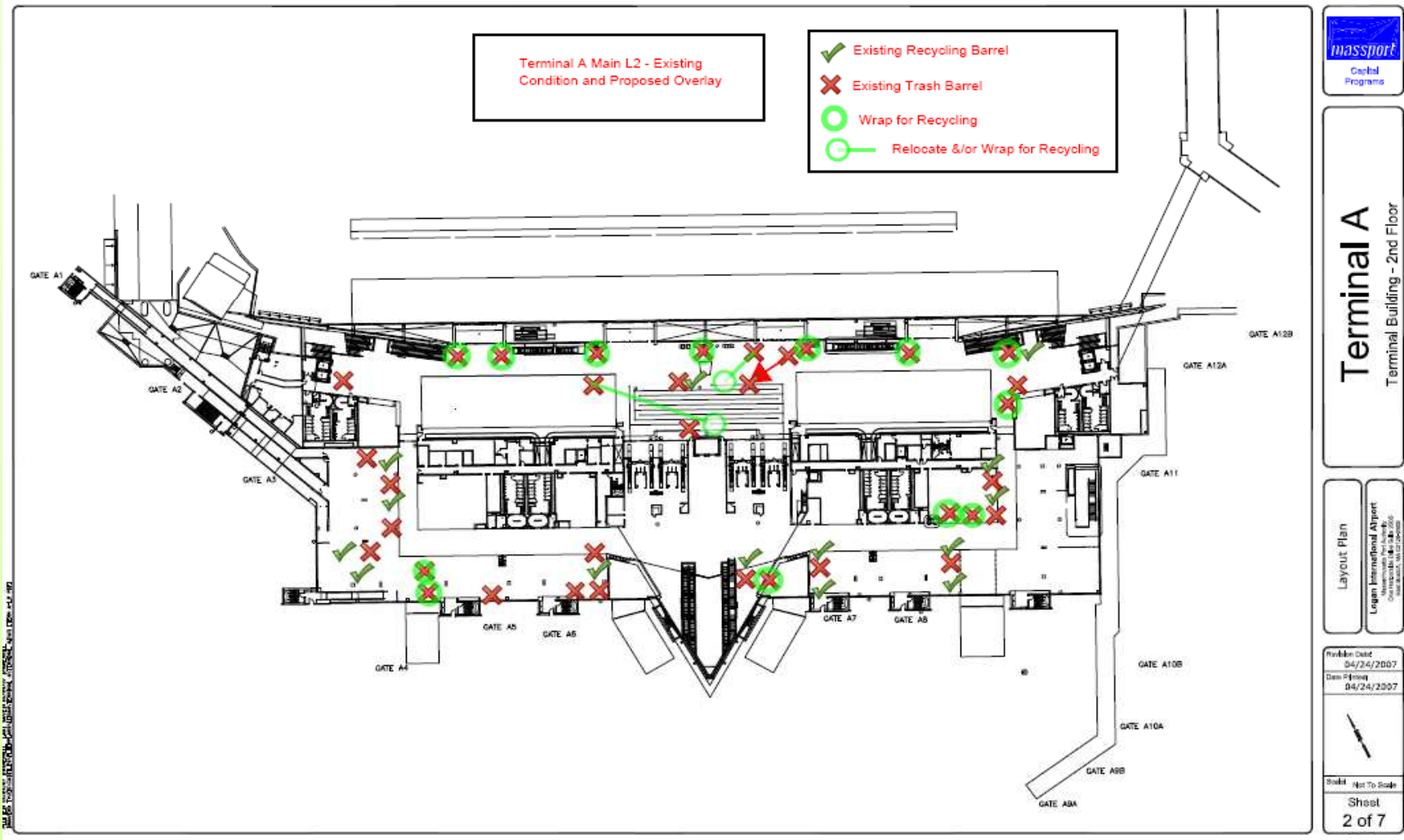
Solution – visible and apparent.



Dumpsters have the same problem. Dirty browns and greens. Only signage at the compactor end. No visual recognition when looking down from 2<sup>nd</sup> floor passenger hold areas.



# Barrel Survey



# Unified rebranding of entire airport



- Backboards (where applicable) up to 12' tall.
- Barrel wrappers (and pictorial ring tops) improve visibility.
- RFP requires recycling dumpsters to be painted or wrapped with matching scheme, including the top of dumpsters.
- We want the passengers to make a cognitive connection between the interior barrels and the bright, clean exterior containers.



# C&D reporting

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- In addition to operations based C&D (pallets & field maintenance), all Capital Programs construction projects are required to report 100% of hauling activities and sorted commodities.
- 2010 – 615 tons of “mixed recyclables”
- 2011 – 51,000 tons of project C&D
- 2012 – 119,000 tons of project C&D
- Thorough, accurate collection and reporting of existing waste reduction activities.



# Additional reportable efforts

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- Ongoing Universal Waste collections and training.
- Earth Day collection events.
- Landscape trimmings diverted to composting.
- Still need to capture data for tires, vehicle batteries, etc.
- Centralizing the waste and recycling services from MPA-only to include all airlines, tenants, and service providers will almost double the tonnage of the program.
- We need to maximize the efficiency and cost avoidance now, before we can grow.



# RFP#5396 Resource Management Contracting – shopping list

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- Goals
- Recycling a priority before trash
- Social and community goals
- Air pollution reduction
- Organics
- Zero Waste
- SWPPP



# Boston-Logan International Airport

Green Buildings

Blue Skies

Enjoy your flight

